

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Amended) A class D ~~electroacoustic~~ audio amplifier without feedback loop containing a supply voltage source (8), an amplifier low-pass filter (14), a power stage (2) controlled by a pulse width modulated signal, a saw-shaped voltage generator (4) and a comparator (3), to one of which inputs an audio signal is sent, while its second input is connected to the adder (6) of the compensation circuit of supply voltage influence on the output audio signal, to which a voltage from a reference voltage source is sent, characterized in that a low-pass filter (9) and a high-pass filter (10) are connected to the supply voltage source (8), and the reference voltage source (12) is connected to an inverting circuit (11), whose input is connected to the low-pass filter (9) output, while the high-pass filter (10) output and the output of the inverting circuit (11) are connected to a multiplier (7), whose output is connected to the input of another multiplier (5), whose second input is connected to the saw-shaped voltage generator (4), and the multiplier (5) output is connected to one input of the adder (6), whose second input is connected to the saw-shaped voltage generator (4).
2. (Amended) The class D ~~electroacoustic~~ audio amplifier, according to claim 1, characterized in that the output signal $v_0(t)$ of the inverting circuit (11) sent to the multiplier (7) input, which is a modified constant of the supply voltage, is expressed by a formula $v_0(t) = k_1 \times V_{DCref} / [k_2 \times v_i(t)]$, where V_{DCref} is the voltage of the reference source, $v_i(t)$ is a slow-changing signal on the low-pass filter (9) output, and the coefficient $k_1 \in <0.5; 2.0>$ and the coefficient $k_2 \in <0.2; 1.5>$.

3. (Amended) The class D ~~electroacoustic~~ audio amplifier, according to claim 2, characterized in that the output signal of the multiplier (7), which is the error signal $e(t)$, sent to the multiplier (5), is expressed by the formula $e(t) = k_3 \times v_0(t) \times v_{ii}(t)$, where $v_0(t)$ is a modified supply voltage constant, $v_{ii}(t)$ is a fast-changing signal on the high-pass filter (10) output, and the coefficient $k_3 \in \langle 0.8; 10.0 \rangle$.
4. (Amended) The class D ~~electroacoustic~~ audio amplifier, according to claim 3, characterized in that the output signal $V_{CM}(t)$ of the adder (6), which is the corrected carrier wave signal, sent to one input of the comparator (3), is expressed by the formula $V_{CM}(t) = k_4 \times V_C(t) \times [1/k_5 + e(t)]$, where $V_C(t)$ is a high frequency carrier wave generated by the generator (4), $e(t)$ is the error signal, and the coefficient $k_4 \in \langle 0.2; 1.5 \rangle$ and the coefficient $k_5 \in \langle 0.2; 3.0 \rangle$.
5. (Amended) A method of compensation of supply voltage influence on the output audio signal in an ~~electroacoustic~~ audio amplifier, which contains a saw-shaped signal generator and a comparator making use of pulse width modulation, and which is powered from a power supply, and to whose input an audio signal is sent, and whose second input is connected to an adder of a compensation circuit of supply voltage influence on the output audio signal, to which a voltage from a reference voltage source is sent, characterized in that from the power supply source (8) a fast-changing signal $v_{ii}(t)$ and a slow-changing signal $v_i(t)$ are extracted and then the slow-changing signal $v_i(t)$ is inverted and multiplied by the a value of a reference supply voltage V_{DCref} , which results in an output signal $v_0(t)$, which then is multiplied by a fast-changing signal $v_{ii}(t)$, which results in an error signal $e(t)$, which then is multiplied by a saw-shaped signal $V_C(t)$ from the generator (4), and the resulting signal is added to a saw-shaped signal $V_C(t)$ and as a corrected carrier wave $V_{CM}(t)$ is sent to one of the inputs of the comparator (3), which makes use of pulse width modulation, and to its second input the audio signal is sent.

6. (Original) The method of compensation of supply voltage influence, according to claim 5, characterized in that the output signal $v_0(t)$ of the inverting circuit (11) sent to the multiplier (7) input, which is a modified constant of the supply voltage, is expressed by a formula $v_0(t) = k_1 \times V_{DCref} / [k_2 \times v_i(t)]$, where V_{DCref} is the voltage of the reference source, $v_i(t)$ is a slow-changing signal on the low-pass filter (9) output, and the coefficient k_1 takes the values from the range $<0.5; 2.0>$ and the coefficient k_2 takes the values from the range $<0.2; 1.5>$.
7. (Original) The method of compensation of supply voltage influence, according to claim 6, characterized in that the output signal of the multiplier (7), which is the error signal $e(t)$, sent to the multiplier (5), is expressed by the formula $e(t) = k_3 \times v_0(t) \times v_{ii}(t)$, where $v_0(t)$ is a modified supply voltage constant, $v_{ii}(t)$ is a fast-changing signal on the high-pass filter (10) output, and the coefficient k_3 takes the values from the range $<0.8; 10.0>$.
8. (Original) The method of compensation of supply voltage influence, according to claim 7, characterized in that the output signal $V_{CM}(t)$ of the adder (6), which is the corrected carrier wave signal, sent to one input of the comparator (3), is expressed by the formula $V_{CM}(t) = k_4 \times V_C(t) \times [1/k_5 + e(t)]$, where $V_C(t)$ is a high frequency carrier wave generated by the generator (4), $e(t)$ is the error signal, and the coefficient k_4 takes the values from the range $<0.2; 1.5>$ and the coefficient k_5 takes the values from the range $<0.2; 3.0>$.
9. (New) A class D audio amplifier comprising
- a comparator having a first input coupled to an audio signal and a second input;
 - a supply voltage source;
 - a power stage coupled to the supply source and to an amplifier loaded by a loudspeaker, the power stage controlled by a pulse-width modulated signal received from the comparator;

a saw-shaped voltage generator for generating a carrier signal of high frequency; and

a compensation circuit for providing a modified carrier signal to the second input of the comparator,

whereby the modified carrier signal is generated by the compensation circuit as a function of the carrier signal and the supply voltage source signal, which are sent to inputs of the compensation circuit.

10 . (New)

The class D audio amplifier according to claim 9, characterized in that the compensation circuit comprises

a low-pass filter coupled to the supply voltage source and generating a slow-changing signal at a low-pass filter output;

a high-pass filter coupled to the supply voltage source and generating a fast-changing signal at a high-pass filter output;

a reference voltage source;

an inverting circuit coupled to the reference voltage source and to the low-pass filter output and generating an inverting circuit signal at an inverting circuit output;

a first multiplier coupled to the high-pass filter output and the inverting circuit output and generating an error signal at an output of the first multiplier;

a second multiplier coupled to the saw-shaped voltage generator and the output of the first multiplier and generating a signal of the second multiplier at an output of the second multiplier; and

an adder connected to the saw-shaped voltage generator and the output of the second multiplier and generating a corrected carrier wave sent to the second input of the comparator.